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Acute Coronary Syndromes

FLUOPYRIMIDINE INDUCED CARDIAC ISCHEMIA: A SYSTEMIC REVIEW AND POOLED ANALYSIS

Poster Contributions
Hall C
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Session Title: Acute Coronary Syndromes: Biologic Considerations
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Authors: *Mohamad Lazkani, Herman Feringa, Sharukh Hashmi, Akil Loli, Banner Good Samaritan Medical Center, Phoenix, AZ, USA, Mayo Clinic, Rochester, MN, USA*

Background: The Fluoropyrimidines (FP), 5-Fluorouracil (5FU) and capecitabine (CAP), remain among the most commonly used chemotherapy. Previously published studies that examined the role of FP with cardiac events have reported inconsistent results regarding adverse events with treatment and clinical outcome. In this study, the medical literature was systematically reviewed for clinical trials to summarize the effect of chemotherapy with use of FP and to further identify differences in clinical outcome for both 5FU and CAP.

Methods: A search in Medline and the Cochrane Central Register of Controlled Trials (from January 1985 to December 2010) was performed to identify randomized controlled studies designed to evaluate cardiac adverse effects with treatment and clinical outcome of patients undergoing chemotherapy. Cardiac ischemia reported as angina, ischemic ECG changes, myocardial infarction, and elevated biomarkers was the primary outcome variable. Data was extracted on all grades of cardiac adverse events, time to reported cardiac event, type of malignancy and pre-existing heart disease.

Results: Of 84 publications identified, only 11 (n=4330) fulfilled selection criteria. Cumulative incidence of cardiac ischemia for duration of study was found to be 0.3% -18.6%. A pooled analysis revealed that 3.1% of patients (n=133) showed manifestations of cardiac ischemia. 81 patients had evidence of ischemic ECG changes. 12 cardiac deaths were reported. 2% (18/917) of patients in the CAP group, and 3.4% (115/3413) in the 5FU group suffered from manifestations of cardiac ischemia (p=0.031).

Conclusion: Clinical and research protocols exist regarding monitoring for cardiotoxicity with anthracyclines, but do not exist for FP's. Our systematic review suggests that cardiac ischemia in this group is significant. In patients with risk factors for heart disease, the use of CAP over 5FU should be considered as the preferred chemotherapeutic agent.